Advanced cosmonautics

Pokročilá kosmonautika

B2

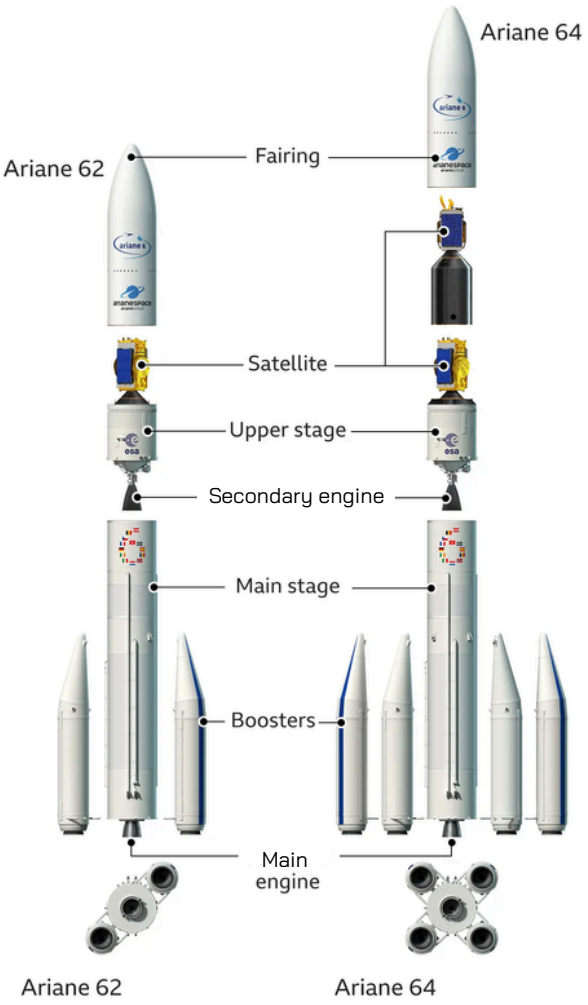
Rockets, their parts and functions / *Rakety, jejich části a funkce*

Ariane 6 is Europe's newest launch vehicle, developed for the European Space Agency (ESA) to replace the older Ariane 5. Its main goal is to guarantee Europe's independent access to space.

This two-stage rocket is powered by liquid hydrogen and oxygen. It comes in two versions depending on the payload: Ariane 62 (with two solid rocket boosters) and the more powerful Ariane 64 (with four boosters). The core stage uses the Vulcain engine, while the upper stage features the new Vinci engine.

After several delays, Ariane 6 made its debut flight in July 2024, followed by a fully successful commercial launch in March 2025. Although it is an expendable (non-reusable) rocket, which has drawn some criticism, it successfully reduces launch costs by 40% compared to its predecessor.

European rockets – Ariane 6



Rocket Vocabulary / *Slovíčka*

The Main Structure

core stage (main) – *hlavní stupeň*
solid rocket boosters (SRBs) – *pomocné vzletové motory*
upper stage – horní stupeň
interstage – mezistupeň

Payload and Protection

fairing – *aerodynamický kryt*
payload – *užitečné zatížení, náklad*
dispenser – *vypouštěcí mechanismus*

Given the current geopolitical landscape, why do you think it is important for Europe to have its own rocket?

Propulsion and Engines

main engine – hlavní motor (zde Vulcain 2.1)
re-ignitable engine – znovuzažehnutelný m. (Vinci)
propellant tanks – nádrže na pohonné hmoty
nozzle – tryska
thrust – tah motoru